

REMARKS

This amendment is in response to the Official Action dated October 28, 2004. Claims 1-15 remain in the application with Claims 1 and 15 being the only independent claims. Favorable reconsideration, in view of the accompanying remarks, is respectfully requested.

In paragraph 4 of the Official Action, the Examiner has rejected Claims 1, 2, 7, 8, 12, 14 and 15 under the provisions of 35 U.S.C. 102(b) as being unpatentable over U.S. Patent No. 5,279,394 to Wollenweber et al. These rejections are respectfully traversed for the following reasons.

Claim 1 defines the invention as a disc brake comprising a caliper; two brake shoes, which are pressable against both sides of a brake disc and which in relation to a peripheral force generated upon application of the brake shoes against the brake disc are supported against a vehicle-fixed carrier, wherein the peripheral force in dependence upon a direction of rotation of the brake disc acts in one of two opposite peripheral force directions; at least one device for at least one of measuring and converting the peripheral force, the device being disposed in a force transmission chain between at least one of the brake shoes and the carrier; and at least one force transmission member, which is disposed between at least one of the brake shoes and the device for at least one of measuring and converting the peripheral force and which is movable under guidance in a plane parallel to the brake disc, wherein the at least one force transmission member is disposed at one side relative to the caliper in order to take up and transmit the generated peripheral force in only one of the two peripheral force directions. None of the cited references, alone or in combination, discloses such a disc brake structure as recited in Claim 1.

The disc brake disclosed in U.S. Patent No. 5,279,394 to Wollenweber et al. is fundamentally different from the disc brake of the present invention. Although the arrangement in Wollenweber et al. includes grooves (42, 44) disposed in a force transmitting position between the brake shoes (16, 18) and the respective guide pins (34, 36) incorporating a force measurement device, the direction of the movement of groove bodies (52) of the guide pins (34, 36) engaged in the grooves (42, 44) is

entirely different than that of the present invention. As Wollenweber et al. clearly describes at col. 4, lines 5-15, the “grooves extend parallel to the rotational axis A_x of the brake disc 10” and “on actuation of the brake the groove bodies (52) slide over the guide pins”. The direction of the movement of the groove bodies (52) is clearly described at col. 4, lines 46-51 where it recites that the movement of these groove bodies or “force transmission members” is in the axial direction of the guide pin (36) and therefore the brake disc, or in other words, perpendicular to the brake disc. The present invention, by contrast, includes “at least one force transmission member, which is disposed between at least one of the brake shoes and the device for at least one of measuring and converting the peripheral force and which is movable under guidance in a plane parallel to the brake disc, wherein the at least one force transmission member is disposed at one side relative to the caliper in order to take up and transmit the generated peripheral force in only one of the two peripheral force directions”, as recited in Claim 1. The importance of this fundamentally different arrangement of the present invention is explained in the specification at page 2, lines 19-26 where it recites that “Such an arrangement of the force transmission member guarantees that a transverse force introduced by a brake shoe into the force transmission member acts, not upon the device for measuring and/or converting the peripheral force, but upon a guide provided for the force transmission member. The device for measuring and/or converting the peripheral force is consequently acted upon exclusively by the peripheral force and is able to measure and/or convert the peripheral force precisely. The transverse force, on the other hand, is “filtered out” by means of the force transmission member and does not influence the measurement and/or conversion of the peripheral force.” In contrast thereto, in Wollenweber et al. any transverse forces are fully transmitted to the force measuring guide pins (34, 36) and deteriorate measurement accuracy. Accordingly, it is believed that Claim 1, along with dependent Claims 2-14 are patentable over the cited references.

Independent Claim 15 is similar to Claim 1 in that Claim 15 also recites that the “at least one force transmission member ... is movable under guidance in a plane parallel to the brake disc”. Thus, for those reasons discussed above with respect to Claim 1, it is believed that Claim 15 is patentable over the cited references.

In paragraph 5 of the Official Action, the Examiner has indicated that Claims 4-6 contain allowable subject matter if rewritten in independent form including all of the limitations of the base claim and any intervening claims. As discussed above, it is believed that independent Claim 1, along with dependent Claims 2-14 are patentable over the cited references.

In view of the above amendments and accompanying remarks, it is believed that the application is in condition for allowance. However, if the Examiner does not believe that the above remarks place the application in condition for allowance, the undersigned attorney respectfully requests a telephone conference with the Examiner to discuss the application and the prior art references prior to the issuance of a final action by the Examiner.